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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/538,339	03/29/2000	KATSUYUKI NANBA	15162/01750	6182

24367 7590 11/26/2002

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EXAMINER

LUEDKE, SCOTT L

ART UNIT	PAPER NUMBER
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2697

DATE MAILED: 11/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/538,339

Applicant(s)

NANBA ET AL.

Examiner

Scott L Luedke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on September 17, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Reply to Applicant's Amendment and Response

1. Applicant's arguments with respect to Claims 1-14 have been considered but are moot in view of the new ground(s) of rejection. Examiner has analyzed amended Claims 2, 5-9 and new claims 10-14 and the following discussion states the basis(s) for rejecting each respective claim.

Claim Rejections - 35 USC § 112

2. The new Claim 14 recites the limitation "a method as claimed in claim 14, wherein the at least one peripheral device is a storage medium driver. There is insufficient antecedent basis for this limitation in the claim. A dependent Claim may not depend from itself.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the Claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-5 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori Kuno, et. al., U.S. Patent 5,467,102 (hereinafter, referred to as "*Kuno*") in view of Yoon Seok Song, et. al., U.S. Patent 5,777,611 (hereinafter, referred to as "*Song*").

Regarding Claim 1 and amended Claim 2, *Kuno* discloses an information display device (Figures 1, 3 and 11) comprising a display section (Fig. 1, Item 100) which displays information stored in a storage medium (Fig. 3, Item 14a); a first driving section (Fig. 3, Item 13a) which drives the display section to write information thereon; a second driving section (Fig. 3, Item 13b) which drives the storage medium to read information from the storage medium; a power source section (Fig. 11, Item 30) which supplies electric power to the first and second driving sections.

The *Kuno* reference discloses most of the features of the presently claimed information display device, but lacks full disclosure of a "control section, which inhibits the second driving section from driving the storage medium while the first driving section performs a reset operation of the display section." However, when considering what is taught in *Kuno* in view of the teachings found in *Song*, it becomes obvious to one skilled in the art at the time of the invention to combine them. The *Song* reference discloses a control section (Figure 3) that inhibits the second driving section (Item 15) from driving a storage medium while the first driving section (Item 14) performs a reset operation of the display section (Item 34). It should be understood that the items denoted on Figure 3 as the "first power enable signal" and "second power enable signal" (Items 14 & 15, respectively) may be applied so as to enable operations

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such as: driving a storage medium, driving a display section or for resetting purposes. It should also be noted that a power sequence controller (Item 11) generates a control enable signal, which is an input to the display section (Item 34). Via its circuitry, the signal provides a means for controlling the display section (Item 34), which is responsive to an incoming display signal, a write control signal and/or a reset signal.

The power sequence controller (Item 11), when designated as a display control unit, can discriminate between the reset signal generated when the display system is booted and the reset signal generated when the display system is operating via a feedback path. In sum, when the power sequence of the system receives a reset signal from the circuitry, it disables (i.e., inhibits) the second enable signal, thereby discontinuing its original function (e.g., drive a storage medium), while maintaining the first enable signal, which allows its original function to continue (e.g., drive or reset a display section), see Column 1, Lines 50-67 and Column 2, Lines 47-57.

Not only would it have been obvious to the person of ordinary skill in the art at the time the invention was made to combine these references, but also the motivation to combine and/or modify these references is apparent when considering the reasons to follow. The summary of the invention section of the disclosure (Page 2, Lines 16-23), states that one object of the present invention is to provide for an information display device and method that is "capable of preventing a driving voltage from dropping (e.g., during a reset/boot sequence), which avoids *unstability of operation*" (emphasis added). Additionally, it is stated that one object of the present invention is to provide for an information display device and method that does not degrade the "performance of the system in a rapid display mode." The *Song* reference discloses a method of providing an LCD control unit that is capable of discriminating between a reset

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function of a LCD system (e.g., reset/reboot sequence) and when the LCD system is performing other operations within the system so that the display system does not become “*unstable*” during its regular operation. In addition, the *Song* reference states that “it is imperative that the power sequence controller (control unit) is used the LCD system” because the LCD module can be *damaged* if hardware *reset* is generated *when power is applied* to the LCD module.

Since the *Kuno* reference discloses a display device in which uses such an LCD system as disclosed in the *Song* reference, their combination become obvious to one with ordinary skill in the art at the time of the invention. Their combination also carries a reasonable expectation of success to one with ordinary skill in the art because the feature as disclosed in *Song*, which is directly applicable to apply to LCD systems as described in *Kuno*, would be successful in preventing an “unstability of operation” and “degradation of performance in a rapid display mode,” as stated as an objective stated in the summary of the invention of this case.

As per Claims 3 and 4, the *Kuno* reference explicitly recites (1) an information display device that is capable of making a color display (Column 12, lines 15-18) and also (2) a power source section, which supplies electric power from a battery (Figure 11, Item 30).

Regarding amended Claim 5, *Kuno* discloses a method for displaying information (Figures 1, 3 and 11) comprising a display section (Fig. 1, Item 100) stored in a medium (Fig. 3, Item 14a) on a liquid crystal display (Col. 12, Lines 10-11) comprising the steps of: reading information (Fig. 3, Item 13a) from the storage medium (Fig. 3, Item 14) displaying the information on the liquid crystal display (Col. 12, Lines 10-11); presenting the liquid crystal display in response to a command of writing on the liquid crystal (Fig. 1, Item 100 and Column 12, Lines 15-18). The *Song* reference discloses a method in which the control section (Figure 3)

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inhibits the reading of information from the storage medium during the reset (Fig. 3, Item 34) of the liquid crystal display. Method Claim 5 is noted to recite features equivalent to and performing the same function as in Claim 1, and is, therefore, subject to rejections for the same rationales.

4. With exception to Claims 11 and 14 (which contain additional limitations), added Claims 10-14 recite substantially the same limitations as addressed with respect to Claims 1-5 above, and the same remarks apply.

Claim 11 recites said "at least one other device" as described in claim 10 to exist as a "storage medium driver incorporated in the information display device." *Kuno* discloses a storage medium (Figure 3, Item 14a) that is incorporated into its display section (Fig. 1, Item 100). One embodiment of the display device in *Kuno* supports the notion of incorporating a storage medium into the display section so that the entire display device can "be folded up completely, face to face with each other, such that the display device can be carried in hands easily while protecting the display screens" (Column 3, Lines 54-57).

Examiner assumes that the language of Claim 14 was intended to reflect dependency from Claim 13 rather than from itself (as improperly stated in the amended claim). Claim 14 recites a method for displaying information on a liquid crystal display, wherein the at least one peripheral device is a storage medium driver. With reference to *Kuno* (Figure 11) it is disclosed that peripheral device (e.g., an external memory, Item 31) such as an optical disk device which records a large number of documents and dynamic images can be connected for the purpose of viewing these documents and dynamic images on this display device (Column 9, Lines 12-15).

5. Amended Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kuno* in view of *Song* as applied to claims 1-5 above, and further in view of *Koichi*.

As for Claim 6, *Kuno* reference discloses an information display device (Figures 1, 3 and 11) comprising a display section (Fig. 1, Item 100) which uses liquid crystal (Col. 12, Lines 10-11) and displays information stored in a storage medium (Fig. 3, Items 14 and 14a); a power source section (Fig. 11, Item 30); a selecting section which selects a mode to perform writing of information on the display section at the specified speed (see Fig. 3, Item 13a and discussion *infra*).

Kuno discloses most of the features of the claimed method for displaying information stored in a storage medium on a liquid crystal display as recited in Claim 6-8, except for the claimed feature of a "control section which inhibits the sound reproducing section from reproducing sound when the selecting section selects the mode" (Claim 6) and/or "when the mode is canceled" (Claim 7). However, when considering what is taught in *Kuno* in view of the teachings found in *Song*, as explained in the rejections of Claims 1-5 above, it becomes obvious to one skilled in the art at the time of the invention to combine. More specifically, *Song* teaches a method of inhibiting a driving section (e.g., "a first" or "a second" driving section as claimed herein) from driving another component (e.g., a storage medium as claimed herein). In another embodiment, this method taught in *Song* is applicable in a design that inhibits the driving of a different component, such as a sound reproducing section, from reproducing sound while the controller is directed to either: (a) perform a different task or (b) discontinue any task(s) the controller was presently performing.

The *Kuno* reference also fails to disclose the claimed feature of a “sound reproducing section which reproduces sound in accordance with information displayed on the display section.” However, when considering what is taught in *Kuno* in view of the teachings found in *Koichi*, it becomes obvious to one skilled in the art at the time of the invention to combine them. The *Koichi* reference (Figure 1) discloses a sound reproducing section (i.e., loudspeaker, Item 61), which reproduces sound in accordance with information displayed on the display section. The speech synthesis processing section (Item 59) outputs signals, such as page turning-over sound which was connected with the loudspeaker (Item 61) and synthesized voice based on the control command from a control unit (Item 30), to a loudspeaker (Item 61), see Page 5, Lines 30-39 for translation.

Not only would it have been obvious to the person of ordinary skill in the art at the time the invention was made to combine these references, but also the motivation to combine and/or modify these references is apparent when considering the reasons to follow. The *Koichi* reference discloses a method of using a loudspeaker to communicate with the user of the display device via a synthesized voice based on the control command from a control unit. The *Kuno* reference discloses a method of operating buttons in which controls the speed of moving the pages according to the strength at which these buttons are pressed. If a noise via a loudspeaker as recited in *Koichi* was combined with the display system in *Kuno*, then the user could listen for a noise, beep, voice, etc. when operating the system, which notifies the user when and/or how many pages has been indexed using the display device. Such a combination would have been obvious when performance of the display system in a rapid display mode is the objective.

Regarding amended Claims 7 and 9, the statements presented with respect to *Kuno* and

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Song are incorporated herein. More specifically, the *Kuno* reference fails to disclose the claimed feature of "receiving a command to write information on the liquid crystal display at a specified speed." However, when considering what is taught in *Kuno* in view of the teachings found in *Song*, it becomes obvious to one skilled in the art at the time of the invention to combine them as explained in the rejections of Claims 1-5, above.

Conclusion

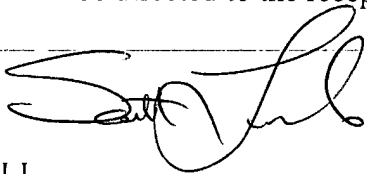
6. An informal translation of the Koichi Japanese Publication is enclosed for your reference. The following references are noted and are not relied upon: (1) *Moughanni*, et. al., (U.S. Patent 6,137,466), which describes a method of refreshing a subset of a display panel for decreasing energy usage; (2) *Kikinis* (U.S. Patent 6,369,792), which describes a method of not requiring any power to maintain an image once formed on a display panel; (3) *Matsuzaki*, et. al. (U.S. Patent 6,140,992), which describes a means for stopping a transmission request of display information by detecting that the display format was changed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Luedke whose telephone number is (703) 305-8327. The examiner can normally be reached on M-F (8:30 AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (703) 305-3885. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9429 for regular communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

A handwritten signature in cursive script, appearing to read 'SLL', written in black ink.

SLL

November 20, 2002

A large, stylized handwritten signature in black ink, consisting of several overlapping loops and a long, sweeping horizontal stroke extending to the right.

JOSEPH MANCUSO
PRIMARY EXAMINER